



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-4212; Directorate Identifier 2015-NM-010-AD; Amendment 39-18451; AD 2016-07-06]

RIN 2120-AA64

Airworthiness Directives; BAE Systems (Operations) Limited Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for all BAE Systems (Operations) Limited Model BAe 146 series airplanes and Model Avro 146-RJ series airplanes. This AD was prompted by reports of cracking of the main fitting of the nose landing gear (NLG) and a determination that a new safe-life limitation for affected NLG main fittings has not been mandated. This AD requires replacing affected NLG main fittings that have exceeded the safe-life limitation with a new or serviceable fitting. We are issuing this AD to prevent collapse of the NLG, which if not corrected, could lead to degradation of direction control on the ground or an un-commanded turn to the left, and a consequent loss of control of the airplane on the ground, possibly resulting in damage to the airplane and injury to occupants.

DATES: This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact BAE Systems (Operations) Limited, Customer Information Department, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland, United Kingdom; telephone +44 1292 675207; fax +44 1292 675704; email RAPublications@baesystems.com; Internet <http://www.baesystems.com/Businesses/RegionalAircraft/index.htm>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-4212.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-4212; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone 800-647-5527) is Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC.

FOR FURTHER INFORMATION CONTACT: Todd Thompson, Aerospace

Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA,
1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1175;
fax 425-227-1149.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all BAE Systems (Operations) Limited Model BAe 146 series airplanes and Model Avro 146-RJ series airplanes. The NPRM published in the Federal Register on November 12, 2015 (80 FR 69903) (“the NPRM”).

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive 2012-0191R1, dated November 6, 2012 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for all BAE Systems (Operations) Limited Model BAe 146 series airplanes and Model Avro 146-RJ series airplanes. The MCAI states:

Several occurrences of the aeroplane’s Nose Landing Gear (NLG) Main Fitting cracking have been reported. Subsequently in different cases, NLG Main Fitting crack lead to collapsed NLG, locked NLG steering and an aeroplane’s un-commanded steering to the left.

Cracks in the NLG Bell Housing are not detectable with the NLG fitted to the aeroplane and are difficult to detect during overhaul without substantial disassembly of the gear.

This condition, if not corrected, could lead to degradation of directional control on the ground or an un-commanded turn to the left and a consequent loss of control of the

aeroplane on the ground, possibly resulting in damage to the aeroplane and injury to occupants.

Prompted by these findings, BAE Systems (Operations) Ltd issued Inspection Service Bulletin (ISB) 32-186 (hereafter referred to as the ISB) to introduce a new safe life of 16,000 flight cycles (FC) for certain NLG main fittings, having a Part Number (P/N) as identified in Paragraph 1A, tables 1, 2 and 3 of the ISB.

To correct this unsafe condition, EASA issued [EASA] AD 2012-0191 to require implementation of the new safe-life limitation for the affected NLG main fittings and replacement of fittings that have already exceeded the new limit.

* * * * *

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-4212.

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM or on the determination of the cost to the public.

Conclusion

We reviewed the available data and determined that air safety and the public interest require adopting this AD as proposed, except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Related Service Information under 1 CFR part 51

BAE Systems (Operations) Limited has issued Inspection Service Bulletin ISB.32-186, dated April 12, 2012. This service information describes procedures for reviewing airplane records to determine the part number for the NLG main fittings, and determining the compliance times for replacing the NLG main fittings, and replacing the fitting with a new or serviceable fitting. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

We estimate that this AD affects 4 airplanes of U.S. registry.

We also estimate that it takes about 36 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts will cost \$81,000 per product. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$336,240, or \$84,060 per product.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds

necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2016-07-06 BAE Systems (Operations) Limited: Amendment 39-18451. Docket No. FAA-2015-4212; Directorate Identifier 2015-NM-010-AD.

(a) Effective Date

This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to BAE Systems (Operations) Limited Model BAe 146-100A, -200A, and -300A airplanes; and Model Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A airplanes; certificated in any category; all models, all serial numbers.

(d) Subject

Air Transport Association (ATA) of America Code 05, Time Limits/Maintenance Checks.

(e) Reason

This AD was prompted by reports of cracking of the main fitting of the nose landing gear (NLG) and a determination that a new safe-life limitation for affected NLG main fittings has not been mandated. We are issuing this AD to prevent collapse of the NLG, which if not corrected, could lead to degradation of direction control on the ground or an uncommanded turn to the left, and a consequent loss of control of the airplane on the ground, possibly resulting in damage to the airplane and injury to occupants.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Repetitive Replacement of NLG Main Fitting

At the applicable compliance time specified in paragraphs (g)(1) through (g)(4) of this AD: Replace each affected NLG main fitting, having a part number (P/N) as identified in paragraph 1.A, tables 1., 2., and 3. of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.32-186, dated April 12, 2012, in accordance with the Accomplishment Instructions of that BAE Systems (Operations) Limited Inspection Service Bulletin ISB.32-186, dated April 12, 2012. Thereafter, before the accumulation of 16,000 flight cycles on any affected NLG main fitting having a part number as identified in paragraph 1.A, tables 1., 2., and 3. of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.32-186, dated April 12, 2012, replace each affected NLG main fitting, in accordance with the Accomplishment Instructions of that BAE Systems (Operations) Limited Inspection Service Bulletin ISB.32-186, dated April 12, 2012.

(1) For NLG main fittings that have accumulated 29,000 flight cycles or more since first installation on an airplane: Within 12 months after the effective date of this AD.

(2) For NLG main fittings that have accumulated 20,000 flight cycles or more but less than 29,000 flight cycles since first installation on an airplane: Within 24 months after the effective date of this AD.

(3) For NLG main fittings that have accumulated 16,000 flight cycles or more but less than 20,000 flight cycles since first installation on an airplane: Within 36 months after the effective date of this AD.

(4) For NLG main fittings that have accumulated less than 16,000 flight cycles since first installation on an airplane: Before accumulating 16,000 flight cycles since first installation on an airplane, or within 36 months after the effective date of this AD, whichever occurs later.

(h) Parts Installation Limitation

As of the effective date of this AD, no person may install an NLG main fitting having a part number identified in paragraph 1.A., tables 1., 2., and 3., of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.32-186, dated April 12, 2012, unless that fitting is in compliance with the requirements of this AD.

(i) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve

AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Todd Thompson, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1175; fax 425-227-1149. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) Contacting the Manufacturer: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the European Aviation Safety Agency (EASA); or BAE Systems (Operations) Limited's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(j) Related Information

Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2012-0191R1, dated November 6, 2012, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-4212.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) BAE Systems (Operations) Limited Inspection Service Bulletin ISB.32-186, dated April 12, 2012.

(ii) Reserved.

(3) For service information identified in this AD, contact BAE Systems (Operations) Limited, Customer Information Department, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland, United Kingdom; telephone +44 1292 675207; fax +44 1292 675704; email RAPublications@baesystems.com; Internet <http://www.baesystems.com/Businesses/RegionalAircraft/index.htm>.

(4) You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:
<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.
Issued in Renton, Washington, on March 20, 2016.

Michael Kaszycki,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.
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